

THE 1978 CATV INDUSTRY MARKETING BOOK

Prepared
by: CATJ

Community Antenna Television Journal Suite 106, 4209 NW 23rd, Oklahoma City, Ok. 73107 (405/947-7664)

HBO™
HOME BOX OFFICE FROM TIME/LIFE
HOME BOX OFFICE, INC.
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DALLAS, TEXAS 75251



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VIDEO CABLE SERVICE
DIVISION DE TREEFORD LIMITEE

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Continental CATV Inc.
411 Massachusetts Avenue
Acton, Massachusetts 01720

NATIONAL CABLEVISION LIMITEE
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MONTREAL, QUEBEC
H3A 1V6

THE PERRY CABLE TELEVISION COMPANIES
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Palm Beach Gardens, Florida 33410

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OROVILLE, CALIFORNIA 9596

Cox Cablevision Corporation
409 Union Street
The Dalles, Oregon 97058

cable TV
3000 MACLEOD TRAIL S.E. CALGARY, ALTA. T2G 2P6



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SCHENECTADY, NEW YORK 12309

ICC, INC.
INTERNATIONAL CABLE COMMUNICATIONS
7585 Conroy Court, Suite 10A
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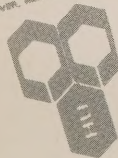
Wally Christiansen
Ketchikan Alaska TeleVision, Inc.
CHANNEL 4
P. O. BOX 1852 - KETCHIKAN, ALASKA 99901

MELVIN COHEN
TELEVISION BROADCAST ENGINEER
May Company Building
3651 Prospect Avenue
Riverside Beach, Fla. 33404

KARLEN COMMUNICATIONS, INC.
CABLE TV
1205 Main St. - P. O. Drawer 1
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Cox Cable Communications, Inc.
SUITE 300 - 93 PERIMETER CENTER EAST
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CONTINENTAL CABLEVISION OF NEW HAMPSHIRE, INC.
224 CENTRAL AVENUE - DOVER, NEW HAMPSHIRE 03828



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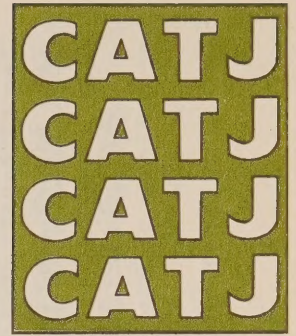
h HAMPTON ROAD CABLEVISION
1000 HUNTER DRIVE - NEWPORT NEWS, VIRGINIA 23601

COVER CREDIT—CATV system owner/operator Pat McConnell of Florida completes the wiring on his CATJ 'Elementary Spectrum Analyzer' during the 1977 CCOS meeting in Oklahoma. Looking on to 'learn how it is done' is NCTA President Bob Schmidt. CATJ's 'real-world' journalism is exemplified by the 'elementary analyzer', first appearing as a do-it-yourself construction article in July of 1975, it grew to an industry wide kit-building project in which 225 CATJ readers participated during 1976 and 1977. Over sixty percent of the CATJ readers who obtained the kit and built the analyzer have subsequently purchased their first 'sophisticated' analyzer. CATJ does more than merely 'report the market'; we create the market!

October, 1977

Dear CATV Industry Supplier:

Forty-two issues ago, CATJ launched its first issue. That was 2,016 pages ago, or 2,116,800 words ago (trust us...there are no prizes for the exact count!), and nine FCC rule changes!



In our August 1974 issue, we published a "CATJ READER SURVEY" and tabulated the results in our "CATJ 1975 Market Study" book. In our August 1975 issue, we did it all over again and published a 1975/76 Market Study.

Now, we have gone through the exercise again....only this time, we felt the time had come to do the job really right, so we:

1. Went to the CATA Associate Members and invited each to submit a question for the readers. These questions were worked into this year's market study, and we ended up with more than 80!!
2. Went all out for response, enticing readers by offering a prize of a Gunnplexer complete microwave system to the lucky entrant, randomly selected (a fellow in West Kansas won, a man new to the cable business just starting his first CATV system!). We ended up with a rather startling 3.96% reader response this year (two percent is supposed to be good enough for statistics).

In fact, the response was heavy enough that, for the first time, we are able to indulge in the luxury of having the ability to look at readership/industry sub-groups, such as "Canadians" (one of our favorite sub-groups), or "Owner/Operator(s)", and "System Managers".

Magazines traditionally conduct readership surveys to buoy up their own image in an industry, or to solicit responses that purposefully tend to make their book look better than the competition. We admit some of this enters our mind, but we've always felt that class tells, and, for this reason, we approached our industry-wide survey from a different perspective.

Our goal is to provide you with meaningful marketing information, the kind we have access to because our readers know and trust us to hold their confidences. We want you to have sufficient facts to allow you to plan your own product marketing in the coming year. We need all of the industry suppliers strong and healthy and want to do a good job for you through our magazine; a basic truism is that the cable industry is only as strong as its suppliers.

So, in these pages, you will find tabulated results have 3.96% of CATJ's readers, a fully representative sampling of industry people who have answered some or all of our 80-plus questions this year---on their own, without prodding.

We hope you find this information useful in your own market planning for the coming year, and that, as you plan your advertising, you will include CATJ! If you have any further questions, or if we can help you with your planning, feel free to contact us.

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The 1977 CATJ Industry Survey marks the fourth consecutive year that CATJ has queried its readers as to the directions they see their own operations, and the industry, taking in the year to 18 months ahead. Two previous 'Marketing Books' have been published for the benefit of industry suppliers, regulatory actions and state and regional trade associations.

Several trends are evident in the tabulation of this year's study:

- 1) Industry response is up; nearly 4 % of all CATJ readers responded.
- 2) Although this was the most comprehensive (and complex) study ever undertaken by CATJ, the typical respondent supplied views or answers for 64 of the 80 questions asked.
- 3) Optimism is up. Systems are planning more new construction, more expansion on existing systems, and more capital investments than in any of the previous four years.

The high response from this year's study allowed CATJ to prepare 'sub-group-totals' for several important categories of readers; including System Managers (i.e. those employed by others to manage one or more systems), Owners/Operators (i.e. those who own their own systems and manage and run the systems), and Canadians (that relatively-speaking small cadre of CATJ readers who have made our 'text' a living legend north of 54:40!).

Use of this year's study will depend largely upon your own attitude, your faith in numbers, and how much you care to discount some of the very-evident optimism reflected herein. For example, if ALL of the systems who are planning to purchase 'low-cost' (Gunnplexer) microwave were to do so within the period now-through January 1, 1979 (the 'future period' projected in the study) in our humble opinion Microwave Associates would have to run triple shifts, seven days a week to meet the need. This has tended to be a 'feast' or famine industry. When times are good and attitudes are positive, as they evidently are now, system operators instinctively look for ways to expand (and spend money). The projections of those systems who will install small-aperture TVRO's between now and January 1, 1979 (like the projection for installation of new 'low-cost' microwave) seems inflated; even by optimistic standards. Yet the numbers we report here are the tabulations we have transcribed from the survey cards. So whether they turn out to be 'real' or not, the operators completing the survey forms and returning the cards believe their answers to be accurate. And perhaps that is the bottom line: The attitude of most operators in most areas of growth and expansion is positive and good. And that alone is a refreshing change.

The 1977 Marketing Survey 'methodology' was as follows: Centerbound into the July (CCOS-77) issue of CATJ was a four sided '1977 Industry Survey Report Card'. Two sides were 'enticement' and instructions; sides 3 and 4 were the actual survey. The survey card, measuring 7-3/16 inches wide by 11 inches high perforated from the magazine, folded into three equal parts, and within the United States first class postage was paid by CATJ/CATA. Canadians and others supplied their own postage. To sweeten the pot we arranged to place all of the survey cards into a container, and to randomly select one card from the group. The winner received a free 'low-cost' Gunnplexer microwave system (transmitter and receiver). Sample (returned card face) returns are shown on the next two pages.

WHO YOU ARE/WHAT YOU DO

RECEIVED
AUG - 4 1977

Name H. Harold Mann, Jr., President
 Company affiliation Coldwater Cablevision Incorporated
 Address Box 428
 Town/city Coldwater State/province Michigan Zip 49036
 You are (check ONE most applicable only):
☒ Owner/operator ☐ Owner (who leaves operation to others) ☐ System engineer ☐ System technician
☐ System Manager ☐ Regional engineer ☐ Regional manager ☐ Employed in manufacturing
☐ other ()
 Number of subscribers you are responsible for/involvement with:
☐ under 500 ☐ 500/1000 ☐ 1000/5000 ☒ 5000/10,000 ☐ over 10,000
 Company you are involved with has:
☐ 1 system only ☒ 2-5 systems ☐ 5-10 systems ☐ over 10 systems
 CATV trade magazines YOU read regularly:
☒ CATJ ☒ TVC ☒ Cablevision ☒ VUE ☐ C/ED
 How YOU rate these regularly-read trade magazines:
 Best CATJ 2nd Best TVC 3rd Best Cablevision
 Which of these magazines do you keep for reference?
 CATJ ☒ TVC ☐ Cablevision ☐ VUE ☐ C/ED

R

YOUR SYSTEM PLANS TO EMPLOY NEW TECHNOLOGY

Do you have ANY applications for new Gunnplexer low-cost microwave? Yes
 Is \$2400 per channel cost effective for your intended uses? Yes
 How many channels might you use between now and 1-1-79 at \$2400 per channel? 12
 How many MORE channels might you use if it was \$1000 per channel? 8
 Will you PROBABLY be installing a "small" TVRO terminal between now and:
yes 1-1-78; if yes how many 1 1-1-79; if yes how many ?
 If you are planning to install a TVRO anytime between now and 1-1-79, will you MOST probably:
☐ Buy complete turnkey; ☒ Buy 'erector set' and do installation yourself; ☐ Buy 'erector set' but order
 some supervision from LNA, antenna or receiver supplier.
 Under present FCC independent/specialty station signal carriage rules, and considering economics involved, which of the
 following statements applies to your system(s):
☐ A small aperture TVRO would allow discontinuance of an existing common carrier feed;
☐ A small aperture TVRO would allow discontinuance of an existing CARS band feed;
☒ A small aperture TVRO would generate a new requirement for a CARS band feed;
☐ I would have no requirement for either TVRO or CARS band microwave.
 Do you feel that additional services such as fire and security protection can become a viable part of your business during:
☐ the next two years ☒ the next five years ☐ the next ten years ☐ never
 Are you planning to purchase any type of automated information channel system during the next 18 months? no
 If YES—how many channels?
 In what price range PER channel? under \$2500, \$2500/8000, over \$8000 per channel.

YOUR SYSTEM(S) HEAD END

Single system only—how many off-air channels do you carry? 11
 We will add off-air channel before 1-1-79.
 We will add microwave fed channels before 1-1-79.
 We will add TVRO fed channels before 1-1-79.

Multiple system personnel only—
 We intend to add 0 channels of off-air equipment before 1-1-79.
 We intend to add 0 channels of microwave fed signals before 1-1-79.
 We intend to add 1 channels of TVRO fed signals before 1-1-79.

Present off-air processing equipment:

Does your head end need upgrading? no
 Will you upgrade antennas before 1-1-79? no
 Will you upgrade pre-amps before 1-1-79? no
 Will you upgrade processors before 1-1-79? no
 Which head end processor interests you most? RCA

Non-Dup Switching Requirements:

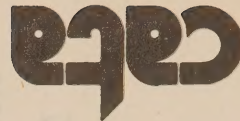
If you plan to add non-dup equipment or change-out existing non-dup equipment before 1-1-79: no

How many channels of simultaneous non-dup gear will you require?

How many channels of syndicated-exclusivity non-dup gear?

If you ARE aware that your present head end does NOT meet 3-31-77 FCC specs:

 I plan to replace it, I will replace only certain items, I plan to leave it alone; I plan to do this
 before 1-1-78, before 1-1-79.



COMMUNITY ANTENNA TELEVISION ASSOCIATION
4209 N. W. 23rd, Suite 106
Oklahoma City, Oklahoma 73107

BUSINESS REPLY MAIL
No Postage Stamp Necessary If Mailed in the United States

FIRST CLASS
Permit No. 2640
Oklahoma City, OK.

REPORT ON YOUR CATV PLANT(S)

How many total miles of trunk and feeder cable do you now have? 175 MILES
 How many additional TRUNK miles are you planning to construct in either new systems or as extensions on existing plants:
 Between now and 1-1-78? 5 Between now and 1-1-79? 0
 How many additional FEEDER miles are you planning to construct in either new systems or as extension on existing plants:
 Between now and 1-1-78? 10 Between now and 1-1-79? 12
 Approximately how many of each of the following tap categories do you anticipate using between now and 1-1-79?
0 pressure taps 0 standard directional taps 300 5-300 MHz bi-directional taps 0 "smart" (addressable) taps
 On 1-1-79, how many TV channels (all categories) do you anticipate carrying in each of the following categories (multiple systems please sum all systems):
10 standard 12 VHF channels 0 mid band channels 0 super band channels
 By 1-1-79, how many channels of PREMIUM or PAY programming do you anticipate having in operation (multiple systems please sum all systems)?
 Of these channels, how many would require use of a security technique?
 How many, using security, would use a form of scrambler/descrambler?
 By 1-1-79, how many new (additional) units of each of the following will you acquire:
2 signal level meters, 1 spectrum analyzer(s), 1 sweep generators, _____ other (specify what in CATV test gear line—)
 For your FCC Proof of Performance testing, do you presently have:
☒ All of the necessary equipment, ☐ most of the necessary equipment,
☒ some of the necessary equipment, ☐ none of the necessary equipment

REPORT ON YOUR COMPANY OPERATIONS

Do you plan to seek financing for your CATV system operation(s) between now and 1-1-79? YES
 If yes:
 _____ For new system acquisition, _____ for refinancing, ☒ for construction of a new system, _____ for expansion of an existing system, _____ for addition of a TVRO, _____ for addition of new microwave, _____ for working capital.
 How do you view the function of a manufacturer's rep in the CATV industry?
 _____ the same as a distributor, _____ same as a manufacturer's in-house sales person, _____ a combination of both of the preceding, ☒ unknown view
 Does your company/system belong to:
☒ a national trade association, ☒ a regional trade association, _____ a state trade association, _____ NO trade associations.
 How do you PERSONALLY view the state of the CATV industry at the present time in each of the following categories:
 1) Technology is _____ not improving fast enough, ☒ moving at about the right pace, _____ moving too fast for me to keep up.
 2) FCC regulations have become _____ better, _____ stayed the same, _____ gotten worse in the past 12 months.
 3) There is _____ still too much blue sky, ☒ about the right amount of blue sky, _____ not enough blue sky in the CATV industry today.
 4) Considering what you NOW know about fiber optics, do you anticipate getting serious about trying some:
 _____ before 1-1-79; _____ by 1-1-82; _____ sometime thereafter; ☒ not in foreseeable future.

Question: You are (check ONE most applicable only):

Percentage of response - 100%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadians</u>	<u>Owner/Operators</u>	<u>System Managers</u>
Owner/Operator	42.19%	34.00%		
System Engineer	13.25%	11.00%		
System Technician	10.84%	22.10%		
System Manager	19.28%	11.00%		
Regional Engineer	4.82%	0.00% (*)		
Regional Manager	0.00% (**)	0.00% (*)		
In Manufacturing	1.21%	5.50%		
(Consultant)	3.62%	0.00%		
Owner (not active)	2.41%	5.50%		

* - may not be a valid 'title' in Canada

** - may no longer be a valid 'title' in United States

In the overall response, 'other' as a category drew 2.38% of responses of which most were associated with the broadcast (television) industry.

Question: Number of subscribers your are responsible for/involved with:

Percentage of response - 93.98%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadians</u>	<u>Owner/Operators</u>	<u>System Managers</u>
Under 500	17.95%	28.57%	33.33%	13.33%
500/1000	16.67%	14.28%	27.27%	00.00%
1000/5000	29.49%	14.28%	51.51%	46.66%
5000/10,000	19.23%	35.71%	3.03%	26.66%
Over 10,000	16.67%	7.14%	0.00%	13.33%

Notes: If we were to draw a profile of the 'typical' CATJ reader to this point, he would be: (1) an 'owner/operator, or system manager with a responsibility for around 5,000 subscribers.

Question: Company you are involved with has:

Percentage of response - 97.60%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadians</u>	<u>Owner/Operators</u>	<u>System Managers</u>
1 system only	38.25%	71.48%	50.00%	33.33%
2-5 systems	41.75%	28.57%	42.10%	40.00%
5-10 systems	3.80%	0.00%	2.63%	13.33%
over 10 systems	16.20%	0.00%	5.26%	13.33%

Question: CATV trade magazines you read regularly:

Percentage of response - 96.39%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadians</u>	<u>Owners/Operators</u>	<u>System Managers</u>
CATJ	100%	100%	100%	100%
TVC	75.31%	55.56%	63.15%	86.66%
Cablevision	64.20%	33.33%	55.26%	60.00%
VUE	59.26%	22.22%	52.63%	53.33%
C/ED	49.38%	33.33%	34.21%	46.66%

Notes: Obviously, not everyone in the industry is reached by any single publication. And we are candid enough to include CATJ in that statement. However, in the system 'Owner/Operator' category as an example, for every 1,000 circulation you miss 368 of these people with TVC, 447 with Cablevision, 473 with VUE and 657 with C/ED. So much for reach and end of commercial (!).

Question: How YOU rate these regularly-read trade magazines:

Percentage of response - 95.26%

<u>Categories</u>	<u>Total Response Base</u>			<u>Canadians</u>			<u>Owners/Operators</u>			<u>System Managers</u>		
	# One	# Two	# Three	# One	# Two	# Three	# One	# Two	# Three	# One	# Two	# Three
CATJ	95.0%	5.0%	00.0%	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	86.0%	14.0%	0.0%
TVC	2.5%	28.6%	39.5%	0.0%	10.0%	90.0%	0.0%	27.0%	42.0%	7.0%	43.0%	38.0%
Cablevision	1.3%	22.2%	32.6%	0.0%	0.0%	0.0%	0.0%	36.0%	25.0%	7.0%	7.0%	31.0%
VUE	0.0%	9.5%	18.6%	0.0%	0.0%	0.0%	0.0%	10.0%	33.0%	0.0%	14.0%	23.0%
C/ED	1.2%	33.3%	9.3%	0.0%	90.0%	10.0%	0.0%	28.0%	0.0%	0.0%	21.0%	8.0%

Notes: This tabulation is a bit of embarrassment to us; no publication can be that universally acclaimed. Perhaps another publication said it best, for us, about us. In a Cablevision feature describing CATA, it was written "...CATJ readers are fiercely loyal ...". They are. As one Californian penned in response to this survey question "...CATJ /// after that there is no second-best!!!".

It's hard to be THAT good. We know we are not. But the fact remains some readers do feel that strongly about CATJ.

Question: Which of these magazines do you keep for reference?

Percentage of response - 94.18%

<u>Categories</u>	<u>Total Response Base</u>
CATJ	100.00%
TVC	32.91%
Cablevision	18.99%
VUE	11.39%
C/ED	25.32%

Notes: Now we KNOW this is a pretty accurate response. Long-long ago older, back (collector) issues of CATJ ran dry at the well. In the average day's mail there are from 1 to three requests for back sets; often complete back sets. So early in 1978 we will be creating a 'CATJ Anthology', a collection by topic categories of every piece ever published by CATJ on everything from 'A' (antennas) to 'Y' (yagis, which also happens to be an antenna). And in between as well. There will be a very unique 'image-advertising' opportunity here. We'll tell you about it late in 1977.

Question: Do you have ANY applications for new Gunnplexer low-cost microwave?

Percentage of response - 87.95%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadians</u>	<u>Owners/Operators</u>	<u>System Managers</u>
Yes	79.45%	n/a	73.68%	46.66%
No	20.55%	n/a	26.32%	53.33%

Question: Is \$2,400 (*) per channel cost effect for your intended uses?

Percentage of response - 83.34%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadians</u>	<u>Owners/Operators</u>	<u>System Managers</u>
Yes	67.14%	n/a	48.48%	41.66%
No	32.86%	n/a	51.52%	58.33%

Question: How many channels might you use between now and 1-1-79 at \$2,400 per channel?

Percentage of response - 55.42%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadians</u>	<u>Owners/Operators</u>	<u>System Managers</u>
(answers averaged for each group)	4.21 channels	n/a	3.05 channels	3.28 channels

Notes: Well now, of the total respondents to the survey, 87.95% answered this question. And 79.45% of that 87.95% said 'Yes - they had applications for low-cost microwave'. Using a U.S. system base of 3,700 systems that's 2,585 systems interested in 'low-cost' microwave.

But - is \$2,400 low enough (*)? That's the number we tagged on the Microwave Associates Gunn/Microplexer gear, per channel (it turns out it will cost \$2,950 per channel). 83.34% of all systems responding chose to answer the price consideration question and 67.14% of those said 'Yes - it is low enough'. Then of those 67.14%, they averaged 'interest-in' 4.21 channels each on or before 1-1-79. That works out to 2,070 systems purchasing an average of 4.21 channels each or a total of 8,716 channels of low-cost microwave. Hummm. That IS alot of microwave gear. But there's more.

Question: How many MORE channels might you use if it was \$1000 per channel?

Percentage of response - 62.65%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadians</u>	<u>Owners/Operators</u>	<u>System Managers</u>
(answers averaged for each group)	6.35 channels	n/a	6.54 channels	2.25 channels

Notes: The same elementary extrapolation and math determines that 2,318 systems nationwide would have need for 6.35 additional 'really-cheap' (\$1,000 per channel) microwave channels; a total of 14,720 new channels of low-cost (really low cost!) microwave. A very big number. So consider the industry 'optimistic' and divide by 2. Or 4. It's still a very big number.

Question: Will you PROBABLY be installing a "small" TVRO terminal between now and...

Percentage of response: - 44.58%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadians</u>	<u>Owners/Operators</u>	<u>System Managers</u>
(by) 1-1-78	45.95%	n/a	41.17%	13.33%
(by) 1-1-79	54.05%	n/a	35.00%	13.33%

Notes: There was a second part to the question. It read "If yes, how many?".

This is one of those questions that begs for numbers, not percentages. OK - between July 1977 and 1-1-79, extrapolation of responses tells us that the industry plans to install (take a deep breath now) 1,847 "small" TVRO terminals. And, 760 of these terminals are planned by the "Owner/Operator" member of the industry. But that is only part of the optimism on TVRO's. The rest is that 45.95% of those, or 849 "planned" to install them before 1-1-78.

Perhaps their 'timing' is bad, but their intent shows. And to think CATJ started this whole thing (that's a 'plug' for our creativity.)

Question: If you are planning to install a TVRO between now and 1-1-79, will you MOST probably:

Percentage of response - 44.58%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadian</u>	<u>Owners/Operators</u>	<u>System Managers</u>
Buy complete turnkey	14.29%	n/a	4.00%	25.00%
Buy 'erector set' and do own installation	47.62%	n/a	43.00%	50.00%
Buy 'erector set' but order some supervision	38.10%	n/a	43.00%	25.00%

Notes: And that ought to tell you something about how YOU should be 'bidding' your TVRO jobs these days!

Question: Under present FCC independent/specialty station signal carriage rules, and considering economics involved, which of the following statements applies to your system(s)?

Percentage of response - 50.60%

<u>Categories</u>	<u>Total Response Base</u>	<u>Owners/Operators</u>	<u>System Managers</u>
Small aperture TVRO would allow discontinuance of common carrier feed...	15.09%	15.38%	12.50%
Small aperture TVRO would allow discontinuance of existing CARS band feed...	5.66%	3.84%	00.00%
Small aperture TVRO would create need for new CARS band feed ...	58.49%	57.69%	62.50%
No need for TVRO or CARS band system ...	20.76%	23.07%	25.00%

Notes: This question, offered by a supplier of microwave equipment, presents some interesting interpretations. For example, if you extrapolate just those systems who plan to add one (or more) microwave channels as one sub-group, you find that based upon the response there are 1,095 systems planning to add both a small aperture TVRO and a new (CARS band) microwave system. Another rather interesting sub-group are those who will drop an existing common carrier feed with the addition of a TVRO; it works out to 282 systems nationwide.

Question: Do you feel that additional services such as security protection can become a viable part of your business during:

Percentage of response - 87.95%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadian</u>	<u>Owners/Operators</u>	<u>System Managers</u>
...the next two years	15.07%	n/a	17.64%	13.33%
...the next five years	32.88%	n/a	26.47%	40.00%
...the next ten years	32.88%	n/a	35.29%	33.33%
...never	19.18%	n/a	20.58%	13.33%

Notes: A nice 'bell shaped' curve in the response department with 'slightly more' weighting on the far side of the curve than on the leading edge. Bottom line - security services via cable TV systems are still not exciting very many systems.

Question: Are you planning to purchase any type of automated information channel system during the next 18 months?

Percentage of response- 78.13%

<u>Categories</u>	<u>Total Response Base</u>	<u>Canadian</u>	<u>Owners/Operators</u>	<u>System Managers</u>
Yes	47.69%	n/a	n/a	n/a
No	52.13%	n/a	n/a	n/a

Question: If yes, how many channels?

Percentage of response- 77.12% of those who answered 'yes' (above); or 36.8 of all systems (as extrapolated)

<u>Categories</u>	<u>Total Response Base</u>
(answers averaged)	1.26 channels per system

Notes: By extrapolation, 36.8% of 3700 systems (1362) times 1.26 channels equals 1716 channels of gear.

Question: In what price range, per channel?

Percentage of response- 77.12% of those who answered yes to first question in set.

<u>Categories</u>	<u>Total Response Base</u>	<u>(Extrapolation)</u>
Under \$2500	42.19%	575 systems times 1.12 channels each ='s 644 channels
\$2500 to \$8000	53.13%	710 systems times 1.12 channels each ='s 795 channels
Over \$8000	4.69%	64 systems times 1.12 channels each ='s 72 channels

Question: For single systems, how many off-air channels do you (presently) carry?

Percentage of response - 69.88%

<u>Categories</u>	<u>Total Response Base</u>
(answers averaged)	8.78 channels per system

Question: We will add, before 1-1-79, the following types of signals ...

<u>Categories</u>	<u>Percentage of response</u>	<u>Average Channels Each</u>	<u>Extrapolation</u>
Off-air channels	26.51%	2.05	981 systems adding 2011 channels
Microwave channels	45.78%	2.63	1694 systems adding 4455 channels
TVRO channels	25.30%	1.24	936 systems adding 1161 channels

Notes: At this point we have three 'sets' of TVRO numbers to work with. They do not agree, and perhaps the best handle rests someplace in between them all.

For example:

- a) Owner/operators (those who are most apt to be single-system operators) earlier reported they would purchase 760 small TVRO's before 1-1-79; that is lower-than the 936 systems indicated immediately above.
- b) In the TVRO versus additional microwave question we extrapolate 1080 'owner/operator' systems adding both TVRO's and CARS band microwave industry-wide. This number is higher than either the 760 or 936 numbers; but it was not within any specified time-frame (i.e. it extended in theory beyond 1-1-79).

So it appears that there is a market for between 760 and 1080 small TVRO systems to 'owner/operators' of CATV systems; a market that is aside from MSO groups utilizing terminals. However, if 'shared terminals catch on, the number of terminals will come down while the number of CARS band systems will go up.

Question: For multiple-system-involved respondents, before 1-1-79 they will add the following types of signals ...

<u>Categories</u>	<u>Percentage of response</u>	<u>Average channels each</u>
Off-air channels	15.66%	10.15 channels per MSO system respondent
Microwave channels	13.25%	7.55 channels per MSO system respondent
TVRO channels	13.25%	3.93 channels per MSO system respondent

Notes: These numbers may not really mean very much, and we accept that without additional raw data it would be extremely difficult to extrapolate any meaningful industry totals.

Question: Your present CATV system headend ... does it

<u>Categories</u>	<u>Base response %</u>	<u>Answer Response/Total</u>	<u>Answer Response/Owners,Operators</u>
..need upgrading?	69.88%		
Yes		50.00%	45.70%
No		50.00%	54.30%
..need antenna upgrading?	63.86%		
Yes		47.17%	n/a
No		52.83%	n/a
..need pre-amp upgrading?	55.42%		
Yes		43.48%	n/a
No		56.52%	n/a
..processor upgrading?	57.83%		
Yes		47.92%	36.11%
No		52.08%	63.89%

Notes: There is an old axiom to survey taking which says that at any given moment approximately 50% of the people will answer 'yes' and 50% of the people will answer 'no' to a non-controversial question which has not been a subject of prior thought. It appears that axiom is right. The only significant point here is that a substantial portion of the owner/operator market does not believe they need to replace their processors before 1-1-79.

Question: Which headend processor interests you most?

Percentage of response - 60.24%

<u>Categories Mentioned</u>	<u>Percentage of mention</u>
Scientific-Atlanta	22 %
RCA/EIE	18 %
Jerrold	12 %
Q-BIT	10 %
Blonder Tongue	8 %
Richey Development Heterodyne	8 %
Benco Benovac	6 %
Triple Crown	6 %
CADCO IPA Strips	4 %

Under 2%

Ameco
Phasecom
'Strips'
TOCOM

Notes: Notice this question did not ask which processor a system might purchase; it asked which "interested" the respondent most. Several observations. The RCA/EIE unit has been little advertised and not well promoted (outside of showings at trade gatherings); yet it managed a strong 'number-two-interest' point. The Q-BIT processor is brand new, very few are in the field, and the only exposure to date has been at CCOS-77 and through the pages of CATJ. The Richey Development (Mini-Dyne) has never been promoted heavily outside of the RDC catalog and an occasional mention in the engineering pages of CATJ. And finally, the CADCO IPA-Strips have not been promoted in several years.

Question: If you plan to add non-dup equipment or change-out existing non-dup equipment between now and 1-1-79, how many

<u>Categories</u>	<u>Base Response %</u>	<u>Answer Response/Total</u>	<u>Answer Response/Owners, Operators</u>
.. <u>simultaneous</u> non-dup channels required?	37.35%	34.2%, 1.81 channels	23.01 %, 1.04 channels
.. <u>syndicated</u> exclusivity channels required?	6.02%	1.20 channels	n/a

Question: How many total miles of trunk and feeder cable do you now have?

<u>Categories</u>	<u>Total Response Base</u>	<u>Owners/Operators</u>
Percentage responding	83.13%	92.11%
Average, per System	102.97 miles	42.49 miles

Question: How many miles of trunk, and feeder, do you plan to add between now and 1-1-78, and, 1-1-79?

<u>Categories</u>	<u>Total Response Base</u>	<u>Owners/Operators</u>
1978 trunk:		
Percentage responding	56.63%	71.05%
Average Miles to add	7.45 miles	6.41 miles
1978 feeder:		
Percentage responding	51.81%	57.89%
Average miles to add	15.09 miles	11.18 miles
1979 trunk:		
Percentage responding	54.22%	73.68%
Average miles to add	11.51 miles (*)	14.61 miles (*)
1979 Feeder:		
Percentage responding	53.01%	55.26%
Average miles to add	26.52 miles (*)	24.55 miles (*)

Notes: * - 1979 figures include 1978 figures plus 1979 figures.

Extrapolation of this set of numbers is extremely dangerous. In spite of reasonably good responses (50-74 %) it may not be fair to extend the averages to all 3700 base-systems in the country. Those not answering, for example, probably did so because (1) they have no 'plans' to extend their plants, or, (2) they are uncertain of what the numbers might be. The 'safe' extension would work only with the percentage of the industry responding; i.e. in the 1979 total response base trunk figures, work with 54.22% of the total industry. If you did this, with a 3,700 system base, you arrive at 2006 systems planning to extend by an average of 11.51 trunk miles each between now and 1-1-79; or 23,089 additional trunk miles for extensions and new construction. Similar extensions could be made for the other categories as well.

One relatively safe extrapolation that can be made is in the 'owner/operator' area; by comparing the present average plant length (42.49 miles) versus the additional plant miles to be built (trunk and feeder) by 1-1-79 (an additional 39.16 miles). That is a growth factor of 92.16% in the coming 15-16 months; not insignificant. It may be far too high in the real world, but the 'stated intent' and the optimism displayed is significant.

Question: Approximately how many of each of the following tap categories do you anticipate using between now and 1-1-79?

<u>Categories</u>	<u>Total Response Base</u>	<u>Owners/Operators</u>
Percentage of response	72.29%	92.11%
Pressure Taps:		
% who will use	6.67%	3.57%
Average per user	375	108
Extended usage	66,902	6,019
Standard DT's:		
% who will use	70.00%	74.50%
Average per user	292	212
Extended usage	756,280	246,549
5-300 MHz bi-directional:		
% who will use	23.22%	21.93%
Average per user	434	333
Extended usage	269,545	113,970
Smart Taps:		
% who will use	0.00%	0.00%

Notes: Keep in mind that the owner/operator sub-group is included in the 'Total Response Base' numbers; that it is separated here because it represents a 'market within a market' for which different marketing techniques must apply. Of some interest is the complete non-interest in 'smart taps' on the part of the industry. Extended usage is the extension and extrapolation of the percentages and average-per-user columns against a 3,700 system data base. I.e., this is the total market for the period ending 1-1-79.

Question: By 1-1-79, how many channels of service do you anticipate having in each of the following categories...

<u>Categories</u>	<u>Percentage of Systems Responding</u>	<u>Average Per System</u>
Standard VHF Channels	86.75%	8.42
Mid Band Channels	26.67%	3.96
Super Band Channels	6.94%	6.66

Notes: Earlier questions had determined that 8.78 off-air channels are currently in use in the average system. To bring the average VHF channels-in-use down to 8.42 (above) indicates that many systems are still carrying far fewer than 8.78 off-air channels, or are prevented from using all VHF channels by local signals.

A typical VHF-only system, then, has 8.42 channels in use; a VHF plus mid-band will have 12.38 channels in use, and a typical VHF plus mid-band plus super-band system will have 19.04 channels in use; by 1-1-79.

Question: By 1-1-79, how many channels of PREMIUM or PAY programming do you anticipate having in operation?

Percentage of response - 45.94%

<u>Categories</u>	<u>Total Response Base</u>
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Average per system	2.18 channels
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Notes: Therefore, if 45.94% of all systems anticipate having pay or premium programming in operation by 1-1-79, and they will average 2.18 channels per system, there is an extension to 3,706 channels of pay/premium programming by 1-1-79. It should be noted in this response that not all systems treat the term 'pay' or 'premium' programming with the same definition. For example, some systems are adding HBO plus CBN and/or WTCG in mid-band channels, charging a single fee for the package that consists of HBO for-pay plus one or two additional channels that are not really pay-intended channels. This therefore raises the number of 'pay/premium' channels per system in the study above the typical 1.0 number we now find.

Question: Of these (pay/premium) channels, how many would require use of a security technique?

Percentage of response - 43.66%

<u>Categories</u>	<u>Total Response Base</u>
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Average per system	2.09 channels
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Notes: This number-per-system (2.09 channels) is almost identical to the 2.18 'pay/premium' channels cited in the preceding question.

Question: How many (channels), using security, would use a form of scrambler/descrambler?

Percentage of response - 22.89%

<u>Categories</u>	<u>Total Response Base</u>
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Average per system	77% of all channels using a security technique
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Notes: This 'forecast' by readers flies in the face of the current trend which is to use passive security such as traps for pay/premium programming. This may indicate a change in the future 15-16 months, or it may simply be 'wishful' planning on the part of the system operators. In either event it is worth watching.

Question: By 1-1-79, how many new (additional) units of each of the following (test equipment pieces) will you acquire?

Percentage of response - Total response base / 71.05%; Owner/Operator response base / 83.13%

<u>Categories</u>	<u>Units Per System (Total base)</u>	<u>Units Per System (Owners/Operators)</u>	<u>Extension, Whole Industry</u>
SLM/FSM's	1.09	1.10	2865 units
Spectrum Analyzers	0.45	0.50	1183 units
Sweep Generators	0.36	0.38	964 units
(Frequency) Counters	0.07	0.09	184 units

Notes: Not all system personnel include the relatively low-cost 'installer meters' in their counts or planning for new SLM/FSM units. Extensions of the whole industry are based upon the 71.05% response to the survey question; those not answering are presumed to be planning no purchases.

Question: For your FCC proof of performance testing, do you presently have ...

<u>Categories</u>	<u>Total Response Base</u>	<u>System Owners/Operators</u>
Percentage Response	74.70%	86.84%
All necessary equipment	25.81%	24.20%
Most necessary equipment	27.42%	33.30%
Some necessary equipment	43.55%	39.40%
None necessary equipment	3.22%	3.00%

Question: Do you plan to seek financing for your operations between now and 1-1-79?

<u>Categories</u>	<u>Total Response Base</u>	<u>System Owners/Operators</u>
Percentage Response	65.06%	94.74%
Yes	57.41%	61.10%
No	42.59%	38.90%

Question: If yes, indicate how you will use new funds ...

<u>Categories</u>	<u>Total Response Base</u>	<u>System Owners/Operators</u>
New System Acquisitions	3.70%	5.60%
Refinancing Operations	3.70%	5.60%
Construct New Systems	35.19%	38.90%
Expand Existing Systems	26.92%	22.20%
Add TVRO Installations	23.08%	25.00%
Add New Microwave	17.31%	11.10%
Working Capital	3.70%	5.60%

Question: How do you view the function of a manufacturer's rep?

<u>Categories</u>	<u>Total Response Base</u>
Percentage Response	79.52%
Same as distributor	7.00%
Same manufacturer's in-house sales person	33.00%
Combination of both preceding	38.00%
Unknown view	22.00%

Question: Does your company belong to....

Percentage of response - 81.08%

<u>Categories</u>	<u>Total Response Base</u>	<u>System Owners/Operators</u>
National association	64 %	50 %
Regional association	29 %	27 %
State association	54 %	44 %
No (trade) association	24 %	24 %

Question: How do you PERSONALLY view the state of the CATV industry at the present time in each of the following categories?

<u>Categories</u>	<u>Total Response Base</u>	<u>System Owners/Operators</u>
Technology - Percentage Response	89.50%	

<u>Categories</u>	<u>Total Response Base</u>	<u>System Owners/Operators</u>
Not moving fast enough	27%	n/a
About right (speed)	67%	n/a
Moving too fast	6%	n/a
FCC Regulations- Percentage Response	86%	90%
Have become better	60%	74%
Have stayed same	21%	15%
Have gotten worse	19%	11%
Blue Sky- Percentage Response	88%	
Still too much blue sky	27%	n/a
About right amount blue sky	58%	n/a
Not enough blue sky	15%	n/a
Fiber Optics- Percentage Response	90%	

Based upon what the system operator NOW knows about fiber optics, he 'intends' to get serious about trying some by:

Before 1-1-79	6%
Before 1-1-82	34%
Sometime thereafter	22%
Not in foreseeable future	38%

Notes: The majority of the industry is (1) happy with the technical advances being made in the industry (although four times as many think we should move faster than believe we are moving too fast); (2) pleased with the recent changes in FCC regulations (this is especially apparent in the owner/operator category); (3) finds the industry riding the proper mid-point on 'blue sky'. Finally, the largest single percentage of respondents do not see any use for fiber optics in their system "within the foreseeable future". However, the next largest response (34%) intends to try some by 1-1-82. Like any new technology, getting some into service will do wonders for its 'image'.

This data illustrates the relationships between (1) CATV systems within each of the 50 states plus Canada, as a function of percentage (%) of all listed systems, (2) the percentage of CATJ readers (out of the total readership) within that state, (3) whether the CATJ readership percentage is positive or negative (i.e. above or below) relative to the percentage of systems in that state, (4) the actual number of readers in that state/political entity, and (5) whether the CATJ 1977 Industry Survey returns from that state were positive (above) or negative (below) the percentage of systems within that state.

<u>State/Entity</u>	<u>Percent Total Systems in ..</u>	<u>CATJ Read- ership % ..</u>	<u>Readership v.s. systems</u>	<u>Quantity of readers there</u>	<u>1977 Survey results ...</u>	<u>Comments</u>
Alabama	86/ 2.12%	0.96%	-	52	+	
Alaska	14/ 0.34	0.15	-	8	-	
Arizona	40/ 0.98	0.90	-	49	+	
Arkansas	95/ 2.34	1.71	-	95	-	
California	293/ 7.21	8.50	+	462	+	largest single state readership
Colorado	39/ 0.96	0.90	-	49	+	
Connecticut	13/ 0.32	1.10	+	60	+	
Delaware	9/ 0.22	0.20	-	11	-	
Florida	114/ 2.80	3.29	+	179	+	
Georgia	80/ 1.97	1.56	-	85	+	
Hawaii	10/ 0.25	0.66	+	36	-	
Idaho	48/ 1.18	0.40	-	22	-	
Illinois	84/ 2.07	2.57	+	140	+	
Indiana	72/ 1.77	1.97	+	107	-	
Iowa	46/ 1.13	1.62	+	88	+	
Kansas	100/ 2.46	1.91	-	104	-	
Kentucky	108/ 2.66	2.17	-	118	-	
Louisiana	40/ 0.98	0.50	-	27	-	
Maine	32/ 0.78	0.50	-	27	+	
Maryland	30/ 0.74	1.01	+	55	-	
Massachusetts	33/ 0.81	0.86	+	47	-	
Michigan	82/ 2.02	2.63	+	143	+	
Minnesota	90/ 2.21	1.47	-	80	+	
Mississippi	65/ 1.60	0.41	-	22	-	
Missouri	79/ 1.94	1.51	-	82	-	
Montana	35/ 0.86	0.46	-	25	-	

Use of data: Find state of interest. First column shows number of 'known' systems in state, and the percentage that number represents in U.S. and Canada total system count. Second column shows percentage of all CATJ readers in state. Third column indicates (plus and minus) whether CATJ readership is equal to or less than percentage of systems in state. Fourth column is actual number of readers in state.

<u>State/Entity</u>	<u>Percent Total Systems in ..</u>	<u>CATJ Read- ership % ..</u>	<u>Readership v.s. systems</u>	<u>Quantity of Readers there</u>	<u>1977 Survey results ...</u>	<u>Comments</u>
Nebraska	47/ 1.16%	0.41%	-	22	-	
Nevada	9/ 0.22	0.35	+	19	+	
New Hampshire	38/ 0.94	0.66	-	36	-	
New Jersey	35/ 0.86	2.08	+	113	-	
New Mexico	33/ 0.81	0.61	-	33	-	
New York	182/ 4.48	6.46	+	351	-	
North Carolina	52/ 1.28	1.71	+	93	+	
North Dakota	27 0.66	0.52	-	28	+	
Ohio	171/ 4.21	3.40	-	185	-	
Oklahoma	89/ 2.19	3.49	+	170	+	
Oregon	97/ 2.39	2.37	-	129	+	
Pennsylvania	317/ 7.80	8.55	+	461	-	
Rhode Island	1/ 0.02	0.09	+	5	-	
South Carolina	40/ 0.98	0.46	-	25	-	
South Dakota	17/ 0.42	0.20	-	11	-	
Tennessee	70/ 1.72	0.90	-	49	-	
Texas	250/ 6.15	5.55	-	302	-	
Utah	6/ 0.15	0.29	+	16	-	
Vermont	38/ 0.94	0.70	-	38	+	
Virginia	70/ 1.72	1.71	-	93	+	
Washington	106/ 2.61	1.67	-	91	-	
West Virginia	176/ 4.33	1.88	-	102	-	
Wisconsin	78/ 1.92	1.56	-	85	+	
Wyoming	26/ 0.64	0.41	-	22	-	
<u>Washington, D.C.</u>	0/ 0.00	2.02	+	110	-	
Foreign	unknown	1.12		61	-	in 34 countries
<u>Canada</u>	351/ 8.63	10.91	+	593	+	
<u>Totals:</u>	<u>4,066 systems</u>			<u>5,438 readers</u>		

The Community Antenna Television Association provides an Associate Member program for suppliers to the industry. This program is open to any company providing 'goods or services' to the CATV industry.

The Associate Member program has grown dramatically during the past three years. From an Associate Member count of 29 at the end of the first year, there are now 73 CATA Associate members.

This program functions in the following manner:

- 1) Annual membership is \$150.00. It is not on a fixed calendar year; it begins with the date of acceptance of the application and runs for 365 days.
- 2) Associate members are listed in CATJ monthly, in the 'Associates' section of the publication. A sample of such a listing appears on the next page. Listings are 'coded' by type of associate business activity.
- 3) Associate members are entitled to use, without limitations, the 'Associate's Showcase' section of CATJ; which reports on new products and services offered by CATA associates. A typical 'Showcase' appears two pages ahead.

Note: Normal editorial 'balance' is maintained with this section of CATJ, and personnel changes are not published.

- 4) Associate members are entitled to participate in the CATA CCOS program; consisting of both the national 'Cable Operator's Seminar' held each summer, and, regional 'mini-CCOS' meetings held during the fall and spring periods of the year.

At the national CCOS meeting, Associate Members are entitled to equal-size table-top display space; there is no charge for the display space. Associates are also asked to assist, where able and willing, with the 'seminar sessions' at CCOS (by providing equipment, speakers, demonstrations). During CATA/CATJ's mini-CCOS schedule each fall and spring suppliers with 'technology to share' are offered the opportunity to participate in the regional meeting program.

- 5) Associate members receive special advertising rate discounts in CATJ. In addition to normal agency discounts for camera-ready materials, a "5 percent associate discount" is subtracted from all display-space advertising in CATJ. An advertiser using six full pages per year (or 12 half pages) just about "pays for" his annual CATA Associate Membership, with the advertising discount.
- 6) Associates also receive a wide range of CATA support, literature and materials as part of the Associate member program. An Associate Member application form is included in this year's Marketing Book.

CATA ASSOCIATES

In recognition of the untiring support given to the nation's CATV operators, and their never-ending quest for advancement of the CATV art, the COMMUNITY ANTENNA TELEVISION ASSOCIATION recognizes with gratitude the efforts of the following equipment and service suppliers to the cable television industry, who have been accorded ASSOCIATE MEMBER STATUS in CATA, INC.

AEL, INC., CATV COMMUNICATIONS DIV., P.O. Box 552, Lansdale, PA 19446, (M1, S2) 215-822-2929
 Andrew Corp., 10500 W. 153rd St., Orland Park, IL 60462 (M2, M3, M9 Satellite Terminals) 312-349-3300
 Anixter-Pruzan, Inc., 1963 First Ave. S., Seattle, WA 98134 (D1) 206-624-0505
 Avantek, Inc., 3175 Bowers Avenue, Santa Clara, CA 95051 (M8) 408-249-0700
 Belden Corp., Electronic Division, Box 1327, Richmond, IN 47374 (M3) 317-966-6661
 BESTON ELECTRONICS, INC. 903 South Kansas Ave., Olathe, KS 66061 (M9) Character Generators-913-764-1900
 BLONDER-TONGUE LABORATORIES, One Jake Brown Rd., Old Bridge, N.J. 08857 (M1, M2, M4, M5, M6, M7) 201-679-4000
 BROADBAND ENGINEERING, INC., 535 E. Indiantown Rd., Jupiter, FL 33458 (D9, replacement parts) 305-747-5000
 CALIFORNIA MICROWAVE, INC., 455 West Maude Ave., Sunnyvale, CA 94086 (M9 Satellite Terminals) 408-732-4000
 CATEL, 1400-D Stierlin Rd., Mt. View, CA 95043, (M4, M9) 415-969-9400
 CCS HATFIELD/CATV DIV. 5707 W. Buckeye Rd., Phoenix, AZ 85063 (M3) 201-272-3850
 C-COR ELECTRONICS, Inc., 60 Decibel Rd., State College, PA 16801 (M1, M4, M5, S1, S2, S8) 814-238-2461
 COLLINS COMMERCIAL TELECOMMUNICATIONS, MP-402-101, Dallas, TX 75207, (M9, Microwave) 214-690-5954
 COMMUNICATION EQUITY ASSOCIATES, 8200 Normandale Blvd., Suite 323, Bloomington, MN. 55435 (S3) 612-831-4522
 COMM/SCOPE COMPANY, Rt. 1 Box 199A, Catawba, NC 28609, (M3) 704-241-3142
 ComSonics, Inc., P.O. Box 1106, Harrisonburg, VA. 22801 (M8, M9, S8, S9) 703-434-5965
 C R C ELECTRONICS, INC., P.O. Box 855, Waianae, HI 96792, (M9 Videotape Automation Equipment) 808-668-1227
 DAVCO, INC., P.O. Box 861, Batesville, AR. 72501 (D1, S1, S2, S8) 501-793-3816
 EAGLE COM-TRONICS, INC., 8016 Chatham Dr., Manlius, N.Y. 13104 (M9 Pay TV Delivery systems & products) 315-682-2650
 EALES COMM. & ANTENNA SERV., 2904 N.W. 23rd, Oklahoma City, OK 73107, (D1,2,3,4,5,6,7, S1,2, S7,8) 405-946-3788
 FARINON ELECTRIC, 1691 Bayport, San Carlos, CA. 94070 (M9, S9) 415-592-4120
 FEDERAL BROADCASTING CO. 600 Fire Rd. Box 679 Pleasantville, N.J. 08232 (D9, S9)
 FERGUSON COMMUNICATIONS CORP., P.O. Drawer 871, Henderson, TX. 75652 (S1, S2, S7, S8, S9) 214-854-2405
 FRANK L. CROSS & ASSOCIATES, INC., 5134 Melbourne Dr., Cypress, CA 90630, (M9) 714-827-0868
 GILBERT ENGINEERING CO., P.O. Box 14149, Phoenix, AZ. 85063 (M7) 602-272-6871
 G T E SYLVANIA, 3046 Covington Rd., Marietta, GA 30062, (M1,D1) 404-003-1510
 HOME BOX OFFICE, INC., 7839 Churchill Way—Suite 133, Box 63, Dallas, TX 75251 (S4) 214-387-8557
 ITT SPACE COMMUNICATIONS, INC., 69 Spring St., Ramsey, N.J. 07446 (M9) 201-825-1600
 JERROLD Electronics Corp., P.O. BOX 487, Byberry Rd. & PA Turnpike, Hatboro, PA 19040, (M1, M2, M4, M5, M6, M7, D3, D8, S1, S2, S3, S8) 215-674-4800
 JERRY CONN ASSOCIATES, INC., P.O. Box 444, Chambersburg, PA 17201 (D3, D4, D5, D6, D7, D8) 717-263-8258
 LARSON ELECTRONICS, 311 S. Locust St., Denton, TX. 76201 (M9 Standby Power) 817-387-0002
 LRC Electronics, Inc., 901 South Ave., Horseheads, N.Y. 14845 (M7) 607-739-3844
 Magnavox CATV Division, 133 West Seneca St., Manlius, N.Y. 13104 (M1) 315-682-9105
 MICROWAVE ASSOCIATES, INC. 10920 Ambassador Drive—Suite 119 Kansas City, MO. 64153 (M9) Microwave Radio Systems-816-891-8895
 Microwave Filter Co., 6743 Kinne St., Box 103, E. Syracuse, N.Y. 13057 (M5, bandpass filters) 315-437-4529
 MID STATE Communication, Inc. P.O. Box 203, Beech Grove, IN. 46107 (M8) 317-787-9426
 MSI TELEVISION, 4788 South State St., Salt Lake City, UT 84107 (M9 Digital Video Equip.) 801-262-8475
 NORTHERN CATV DISTRIBUTORS, INC., 8016 Chatham Dr., Manlius, N.Y. 13104 (D1) 315-682-2670
 OAK INDUSTRIES INC./CATV DIV., Crystal Lake, IL. 60014 (M1, M9 Converters, S3) 815-459-5000
 PRODELIN, INC., 1350 Duane Avenue, Santa Clara, CA. 95050 (M2, M3, M7, S2) 408-244-4720
 Q-BIT Corporation, P.O. Box 2208, Melbourne, FL. 32901 (M4) 305-727-1838
 RADIO MECHANICAL STRUCTURES, INC., P.O. Box 1277, Kilgore, TX 75662 (M2, M9, S2) 214-984-0555
 R F SYSTEMS, INC., P.O. Box 428, St. Cloud, FL 32769, (M2, M6), 305-892-6111
 RICHEY DEVELOPMENT CORP., 1436 S.W. 44th, Oklahoma City, OK. 73119 (M1, M4, M8, S8) 405-681-5343
 RMS CATV Division, 50 Antin Place, Bronx, N.Y. 10462 (M5, M7) 212-892-1000
 Sadelco, Inc., 299 Park Avenue, Weehawken, N.J. 07087 (M8) 201-866-0912
 Scientific Atlanta Inc., 3845 Pleasantdale Rd., Atlanta, GA. 30340 (M1, M2, M4, M8, S1, S2, S3, S8) 404-449-2000
 SCIENTIFIC COMMUNICATIONS, INC., 3425 Kingsley Rd., Garland, TX 75041, (M4 Low Noise & Parametric) 214-271-3685
 SITCO Antennas, P.O. Box 20456, Portland, OR. 97220 (D2, D3, D4, D5, D6, D7, D9, M2, M4, M5, M6, M9) 503-253-2000
 Systems Wire and Cable, Inc., P.O. Box 21007, Phoenix, AZ. 85036 (M3) 602-268-8744
 TERRACOM, 9020 Balboa Ave., San Diego, CA 92123, (M9 Microwave Earth Stations) 714-278-4100
 TEXSCAN Corp., 2446 N. Shadeland Ave., Indianapolis, IN. 46219 (M8, bandpass filters) 317-357-8781
 Theta-Com, P.O. Box 9728, Phoenix, AZ. 85068 (M1, M4, M5, M7, M8, S1, S2, S3, S8, AML MICROWAVE) 602-944-4411
 TIMES WIRE & CABLE CO., 358 Hall Avenue, Wallingford, CT. 06492 (M3) 203-265-2361
 Titsch Publishing, Inc., P.O. Box 4305, Denver, CO. 80204 (S6) 303-573-1433
 Tomco, Inc., P.O. Box 47066, Dallas, TX. 75247 (M1, M4, M5, Converters) 214-438-7691
 TOMCO COMMUNICATIONS, INC., 1077 Independence Ave., Mtn. View, CA 94043 (M4, M5, M9) 415-969-3042
 Toner Cable Equipment, Inc., 418 Careland Drive, Horsham, PA. 19044 (D2, D3, D4, D5, D6, D7) 215-675-2053
 Triple Crown Electronics Inc., 42 Racine Rd., Rexdale, Ontario, Canada M9W2Z3 (M4,M8) 416 743-1481
 UNITED PRESS INTERNATIONAL, 220 East 42nd St., New York, N.Y. 10017, (S9) (Automated News Svc.) 212-682-0400
 UNITED STATES TOWER & FAB. CO. P.O. Drawer "S", Afton, OK 74331 (M2,M9) 918-257-4257
 Van Ladder, Inc., P.O. Box 709, Spencer, Iowa 51301 (M9, automated ladder equipment) 712-262-5810
 VIDEO DATA SYSTEMS, 40 Oser Avenue, Hauppauge, N.Y. 11787 (M9) 516-231-4400
 VITEK ELECTRONICS, INC., 200 Wood Ave., Middlesex, N.J. 201-469-9400
 WAVETEK Indiana, 66 N. First Ave., Beech Grove, IN. 46107 (M8) 317-783-3221
 WEATHERSCAN, Loop 132 - Throckmorton Hwy., Olney, TX. 76374 (D9, Sony Equip. Dist., M9 Weather Channel Displays) 817-564-5688
 Western Communication Service, Box 347, San Angelo, TX. 76901 (M2, Towers) 915-655-6262/653-3363

NOTE: Associates listed in bold face are Charter Members



SHOWCASE



AML Guide Book

A new brochure/booklet from the Hughes Aircraft Company puts the AML "story" into context for people who have an interest in exploring how AML's multiple-channel CARS band microwave transmission and reception system might be an effective answer for their system planning.

The new package describes how AML works, what the operating parameters for several different transmitters and receivers are, and explains typical AML applications. A no-charge copy of the material (entitled "AML Brochure") is available from Hughes Microwave Communications Products, 3060 West Lomita Blvd., Torrance, California 90509 (214/534-2146).

Broadband Has Mod-Kits

Broadband Engineering, Inc. (535 E. Indiantown Road, Jupiter, FL 33458) has announced the availability of field modification kits for many lines of "older" CATV distribution equipment (see CATJ for May 1977). The 'Mod-Kits' are thoroughly tested by Broadband prior to shipment, contain all component parts required to update the operating characteristics of older CATV plant gear and include complete instructions for field modifications.

Typical improvements are: noise figure improvements of 2-3 dB at 220 MHz, cross-mod improvements of 6-10 dB for 12 channels, output capability improvements of 3-5 dB for 12 channels, and increased bandwidth.

Systems To Pruzan

Systems Wire and Cable has announced that it now has a distributor stocking arrangement in effect with Anixter-Pruzan, Inc. Under the terms of the agreement trunk and distribution and drop cables are being stocked in all five of the Anixter-Pruzan warehouses across the United States.

Systems Wire and Cable will continue to provide factory direct shipments from their Phoenix, Arizona plant as well.

TVRO Progress

TelePrompTer Corporation has ordered eighteen (18) 4.5 meter television receive-only satellite terminals from Hughes Aircraft Company. Following the successful installation of their first "small" terminal in Kalispell, Montana (see CATJ for April 1977; page 52) TPT has decided to make similar 4.5 meter installations at additional system sites. This brings the number of TVRO terminals installed or about to be installed for TelePrompTer to 48.

C-COR Has Been Busy

C-Cor Electronics, Inc. (60 Decibel Road, State College, Pa. 16801) recently completed expansion of its manufacturing facilities resulting in a 50% increase in manufacturing floor

space. The expansion includes the installation of a facility for the specialized construction of PC boards. C-COR has also announced the signing of a contract to provide CATV gear and engineering supervision for a new CATV system in West Fargo, North Dakota. A similar contract was announced for the construction of expansion lines for Tele-Media's system headquartered in Key West, Florida. The Tele-Media system is re-building one of the pioneer systems in the United States and expanding the system to serve previously unserved segments of the far southern Florida Keys.

Andrew Corporation (10500 W. 153rd Street, Orland Park, IL 60462) has released specifications on a new 'high-performance' 4.5 meter terminal antenna. The antenna has 44 dBi gain at 4 GHz, employs a three-point mount and is available with a 'shroud' for controlling side lobe rejection in situations where terrestrial interference might be or become a problem. Andrew bulletin 1166 details the new antenna.



Scientific-Atlanta (3845 Pleasantdale Road, Atlanta, Georgia 30340) has been exceedingly busy in the small terminal arena of late. S/A has announced:

- (1) A new model 414 'video' receiver covering 3.7 to 4.2 GHz, with a frequency tuning system employing a synthesizer-tuned down-converter, a threshold-extension system (optional), 15 dB maximum noise figure, input dynamic range of 40 dB and IF bandwidths of from 17.5 to 36 MHz selectable by the choice of the appropriate IF module. RF 'channel' selection is in either .25 or 2.5 MHz increments.
- (2) The new 414 receiver has been ordered, S/A reports, by the State of Alaska for their new "Bush Terminal" receive sites. The "Bush Terminal" sites are providing first-

time television reception to remote Alaskan villages via RCA's SATCOM 'bird'.

- (3) Western Tele-Communications, Inc. (WTCL) has ordered 15 TVRO (5 meter) terminals from S/A for delivery over the next 12 months.
- (4) B.C. Cable in Juneau, Alaska has ordered the S/A 10 meter terminal for delivery of cable TV via satellite programming to Alaska's first TVRO equipped CATV system.
- (5) Telecom Engineering, Inc. has ordered S/A 5 meter terminals for their Ironton, Ohio and Texarkana, Texas systems. The two terminals will supply TVRO delivered programming to a total of six communities.
- (6) Satellite Systems Corporation of Marquette, Michigan (they had the name long before we had the satellite!) has ordered four of the S/A 5 meter terminals for installation at Fort Campbell, Kentucky, Little Rock (AFB), Arkansas, Shaw (AFB), South Carolina and Redstone Arsenal, Alabama.

Prodelin, Inc. (1350 Duane Avenue, Santa Clara, California 95050) has announced that JAMPRO Antenna Company (Sacramento, California) will now be a stocking distributor for Prodelin Copper Coaxial Transmission line and accessories. The stock will include corrugated and smooth sheath cables, connectors, pressurization equipment and accessories.

New Jerrold Products/Materials

Jerrold Electronics (200 Witner Road, Horsham, Pa. 19044) has announced the availability of a host of new products many of which are designed to augment the company's product line-up in the pay-cable field.

- (1) The new **STARPACK** Pay-TV Security System is a scramble/descramble package involving an outdoor descrambler that can be so mounted that the CATV system subscriber is unable to gain easy access to the unit; and the CATV system can retrieve the unit should the customer disconnect from the system. A "low cost" control unit does mount indoors.
- (2) The new **STARCOM-III** Cordless Converter is a remote control system with varactor tuning and an "all electronic memory". The unit functions by sending an ultra-sonic digital control signal from the remote control box to the set-mounted converter. A digital display on the remote control box indicates the channel the package is tuned to; up to 36 channels total. The package also features fine tuning and on-off for the receiver from the remote control package.

There is probably no such animal as an 'ideal', fits-every-situation marketing plan; even within the relatively narrow confines of the CATV industry.

The market itself has changed dramatically during the past decade. Cable and amplifiers once dominated the market. Suppliers could, at one time, sell almost anything into the marketplace by simply make 'new claims'. The market's sophistication has matured and where the larger system operators have grown to the point where competent technical staffs have a very large say in new equipment selected, at the same time the smaller system operator has attended conferences, carefully studied CATJ and developed his own level of expertise.

There are really two markets in CATV; two very distinct markets. The largest, most dominating market continues to be that presented by the top twenty-five or so MSO operators. They account for a very large percentage of the new cable, amplifiers and 'stock' equipment purchased within the industry. And their decisions, more than ever before, are based upon substantial input from their firm's technical experts. The order may be signed because "the price is right", but the salesman wouldn't even be invited into the premises if the equipment had not received the nod-of-approval of the technical staff. The technical staffs may not perceive or create the need, but they have become increasingly influential in determining who fills that need.

The second market is the 'owner/operator'. Years ago he was known as a 'mom and pop operator'. In the earliest days of CATV virtually every system was a 'mom and pop' operation. It was not until TelePrompTer became a 4 system operator in 1960 that the MSO concept, as we now understand it, was hatched. The 'owner/operator' knows well his own shortcomings; a man can only be 'so-much-an-expert' on such diverse subjects as taps, drop materials, headend processors, small aperture satellite terminals and automated information channels. And still have sufficient time remaining to run his business, watch his office, and stay ahead of his bank payments. That's where CATJ's influence and impact is the highest; in providing 'need-to-know' data and guidance for the owner/operator, and, for the technical and middle level management staff of the larger systems operators.

CATJ does not try to be everything to everybody. We purposefully limit our 'journalism' to those areas where we are best qualified to be excellent in everything we attempt to do. This has built a very unusual stature for CATJ in the eyes of people who have a need to know in this industry. As our competitor Cablevision so nicely penned for us ... "CATJ readers are fiercely loyal".

The ideal marketing plan, for most products and services, will reach both markets and all levels of CATV personnel. Select your favorite 'news publication' from the VUE/Cablevision/TVC list. It is important to reach the top MSO management. Then split your budget, right down the middle, with CATJ. That will catch the rest of the market ... the big portion. You'll catch the 'owners and operators' who are "fiercely loyal" and the middle level management and high level technical people with CATJ. In this highly complex, fast moving world that's about as ideal and simple as life can be made!

One of the primary 'assets' of CATA and CATJ continues to be the 'Lab Facility'; located in rural Oklahoma some 45 minutes drive time from our Oklahoma City offices.

CATJ has never made a 'big deal' of the Lab, and perhaps that has been our mistake. But its impact is constantly present through the pages of CATJ, and the actions which the Community Antenna Television Association has taken and continues to take before the FCC and other agencies in Washington.

The 'Lab' is located on property purchased by CATJ's editor in chief Bob Cooper nearly five years ago. At that time, as President and Chief Executive Officer for CATV small-system-supplier CADCO 'Coop' saw the need for CADCO to be constantly putting its products through the paces in the real world. CADCO's creed was to be at or ahead of technology, and that told 'Coop' that the company should be constantly testing and evaluating its own products in the real-world environment where they would be used.

The 'Lab' is a busy place. More than 600 feet of tower are 'up' there, holding every imagineable form of antenna (from rhombics to logs, yagis to parabolics). It has an antenna test range, a complete functioning VHF and UHF headend and the test system in the Lab facility feeds a real world, short CATV system. At any given moment from five to a dozen CATJ research projects are underway; research projects dealing with the preparation of new CATJ editorial material, or developing raw data for CCOS meetings, or even preparing substantiation for a CATA trade association position before the FCC or Congress.

The 'Lab' functions on a very small budget, and a fair amount of the complete test equipment system found there is on loan (or has been outright donated) by suppliers to the industry who believe in the CATJ concept. Dozens of manufacturers have found it profitable to come to CATJ and 'the Lab' first; to allow a confidential, unbiased appraisal of a new piece of equipment which they hope to market in CATV. On occasion, with the permission of the equipment manufacturer, reports on this new equipment performance ends up as 'feature editorial material' in CATJ. Within the CATJ readership family, generally high marks are given for the CATJ "Product Evaluation Reports".

During the fall of 1977 a new addition at the Lab has been a complete, operating six meter TVRO (small aperture) satellite terminal. During the balance of 1977 and throughout 1978 (and beyond) this terminal will play an important part in creating editorial reports on the mushrooming CATV TVRO arena; and on providing technical evaluations of new CATV TVRO equipment. Another recent addition has been a network of low-cost microwave 'paths' using the new Gunnplexer equipment. They all terminus at the Lab, covering paths up to 20.3 miles in length, using equipment designed and built by and for the Lab. Research work with this equipment has already shown up in CATJ, and eventually it will form the backbone for important new changes in CATV microwave rules at the FCC.

The 'Lab' facility approach is unique, within the CATJ industry. Only CATJ has such a facility, and it shows in the quality of the editorial product we generate. And the smart marketing man will think of dozens of ways the 'Lab' can make his own job easier, more productive, and more profitable!

ADVERTISING RATE AND SPECIFICATION SHEET NUMBER THREE

CATJ (Community Antenna Television Journal) is published monthly by the Community Antenna Television Association (Inc.); a non-profit national trade association of owners and operators of cable television systems. CATJ is circulated to members and non-members at all levels of the CATV/MATV/broadcast industries throughout the United States, Canada and in 34 foreign countries.

Format Size	Inch Dimensions (width x height)	1X Rate	6X Rate	12X Rate
Full page	6-7/8" x 9-3/4"	\$510.	\$459.	\$439.
Full, bleed	8-5/8" x 11-1/4"	525.	484.	454.
2/3 page	4-1/2" x 9-3/4"	405.	366.	348.
2/3, bleed	5-3/16" x 11"	420.	381.	363.
1/2 page	6-7/8" x 4-3/4"	306.	291.	260.
1/2 vertical	3-1/4" x 9-3/4"	306.	291.	260.
1/2 island	4-1/2" x 7-1/4"	306.	291.	260.
1/3 page	2-1/6" x 9-3/4"	222.	201.	191.
1/3 island	4-1/2" x 5-1/16"	222.	201.	191.
1/4 page	6-7/8" x 2-3/8"	184.	166.	156.
1/4 vertical	2-1/16" x 7-7/8"	184.	166.	156.
1/4 island	4-1/2" x 3-11/16"	184.	166.	156.
1/6 page	6-7/8" x 1-5/8"	132.	120.	114.
1/6 vertical	2-1/16" x 5-1/4"	132.	120.	114.
1/8 page	6-7/8" x 1-3/16"	110.	99.	93.
1/8 vertical	2-1/16" x 3-7/8"	110.	99.	93.
SPECIFIED POSITIONS (as available)				
Covers 2, 3	6-7/8" x 9-3/4"	560.	504.	476.
Covers bleed	8-5/8" x 11-1/4"	585.	519.	491.
Cover 4 (*)	6-7/8" x 9-3/4"	612.	550.	520.
Cover bleed	8-5/8" x 11-1/4"	637.	575.	545.

*—Cover 4 includes second color, publisher's choice, in rate.

Trim Size—8-1/2" x 11"

Oversized Layouts—'Modestly oversized' layouts, no extra charge; others at cost

Additional Colors—AAAA or PMS colors, \$170.00 per additional color

Agency Commissions—15% to recognized agencies for camera ready art

Layout Charges—Typesetting and artwork charged at cost plus 10%

Terms—2% NET ten days from date of invoice, full NET 30 days.

Discounts—5% to CATA Associate Members, computed after agency discount.

Penalties—Accounts in arrears more than 60 days are charged 1-1/2% per month on unpaid balance; there is an automatic hold on additional advertising for any accounts over 75 days.

Issue Dates—Issued and into the mails between the 5th and the 10th of the dated month.

Advertising Deadlines—Normally, advertising space reservations close plus or minus 3 days of the 12th of the month preceding dated month (i.e. November 12 +/- 3 days for December issue); camera ready art must be received within 5 working days of advertising space closing date.

Special Issues—Three 'extra emphasis' issues per year, related to annual NCTA convention (issued at convention), annual CATA CCOS meeting (issued at CCOS) and Western Cable Television Show (issued at show).

To Place Advertising—Contact Celeste Rule (Managing Editor) at 405-947-7664.



CATA ASSOCIATE MEMBER – APPLICATION

The undersigned tenders this application to the Community Antenna Television Association for Associate Membership in CATA for a period of one year, effective with the date of receipt and acceptance of this application.

Company Name _____

Mailing Address _____

City _____ State _____ Zip _____

Individual Authorizing Membership (print/type) _____

Date of Application _____ Telephone No. _____

About your firm: (Please indicate applicable data)

..Manufacturer of:	..Distributor/Supplier of:	..Service Firm Supplying:
...Full CATV Equipment Line	...Full CATV Equipment Line	...Contracting
...Antennas	...Antennas	...Construction
...Cable	...Cable	...Financing
...Amplifiers	...Amplifiers	...Software
...Passives	...Passives	...Billing Services
...Hardware	...Hardware	...Publishing
...Connectors	...Connectors	...Drop Installation
...Test Equipment	...Test Equipment	...Engineering
...Other	...Other	...Other

Year Firm Entered CATV Industry _____

Instructions to CATA:

- (1) Send Associate Member Subscription to CATJ to: _____ individual given above; _____ to _____
- (2) Send CATJ Head End Wall Chart to: _____ individual given above; _____ to _____
- (3) Send Group Subscription Forms to CATJ to: _____
- (4) We _____ do not plan to use CATJ for advertising
- (5) The individual with our company you should contact for press releases for the Associate's Showcase is: _____

I hereby _____ do not authorize CATJ to publish our firm's name in the CATA ASSOCIATE MEMBER ROSTER.

Our check for \$150.00, covering one year Associate Member dues in CATA is enclosed.

(Signature of Applicant) _____

RETURN TO: CATA, Inc. 4209 NW 23rd, Suite 107, Oklahoma City, Ok. 73107
(405) 947-7664

cata

DATA RECORDING MEMORANDUM - APPLICATION

The following is a summary of the data recorded during the test run of the system. The data was recorded on a continuous basis and is presented in the following order:

1. Test Run Number: 1001

2. Test Run Date: 10/10/68

3. Test Run Time: 10:00 AM

4. Test Run Location: 1001

5. Test Run Operator: 1001

6. Test Run Description: 1001

7. Test Run Results: 1001

8. Test Run Comments: 1001

9. Test Run Status: 1001

10. Test Run Notes: 1001

11. Test Run Summary: 1001

12. Test Run Conclusion: 1001

13. Test Run Recommendation: 1001

14. Test Run Action: 1001

15. Test Run Follow-up: 1001

16. Test Run Review: 1001

17. Test Run Approval: 1001

18. Test Run Signature: 1001

19. Test Run Date: 10/10/68

20. Test Run Time: 10:00 AM

21. Test Run Location: 1001

22. Test Run Operator: 1001

23. Test Run Description: 1001

24. Test Run Results: 1001

25. Test Run Comments: 1001

26. Test Run Status: 1001

27. Test Run Notes: 1001

ATHWEST CABLE T.V.
OAK SHOPPING CENTER
P. O. Box 753
Oakridge, Oregon 97453

SWITZER ENGINEERING SERVICES LIMITED
8840 Indian Line
Mississauga, Ontario L4V 1G2

goats Cable Co.
806 W. WALNUT STREET
WATSEKA, ILLINOIS 60970

TILLAMOOK TELEVISION, INC.
P. O. BOX 445
TILLAMOOK, OREGON 97141

CAT
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SOPP

IAN CABLE VISION CORPORATION
Whalers Village, Kanehale Beach Resort
Post Office Box 1148
Lahaina, Maui, Hawaii 96761

TELEVISION ENTERPRISES, INC.
117 S. A+M
San Angelo, Texas 76901

TEXAS COMMUNITY ANTENNAS, INC.
1001 E. LOOP 282
TYLER, TEXAS 75701

Community Antenna Television
4209 N.W. 23rd
Suite 106
Oklahoma City, Oklahoma

CATJ
4209 N.W. 23rd
Suite 106
Oklahoma City, OK 73107

IRAAN T.V. CABLE
BOX 781
IRAAN, TEXAS 79744

Community Antenna Television
4209 N.W. 23rd Suite
Oklahoma City, Oklahoma

GREEN VALLEY LAKE TV CABLE
(714) 867-2973
STEPHEN BERKELEY
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GREEN VALLEY 92348
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SUITE 106
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OKLAHOMA 73107

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(616) 347-4352

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DYER, TENNESSEE 38540

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ONE BELMONT AVENUE
BALA-CYNWYD, PA 19004

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Suite 106, 4209 N.W. 23rd
Oklahoma City, OK 73107

Community Antenna Television Journals
4209 N.W. 23rd St. Suite 106
Oklahoma City, Oklahoma, 73107

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Iowa
Educational
Broadcasting
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P.O. Box 1758
Des Moines, Iowa
50306

Alva Community TV, Inc.
609 College
Alva, Oklahoma 73917

COURT CABLE COMPANY
P. O. BOX 583
WASHINGTON C. H. OHIO 43190

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38350

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JAN 19 1977



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302 SEVILLE ROAD • BLOOMINGTON, ILLINOIS 61701

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OF WINSTON-SALEM
POST OFFICE BOX 2854
WINSTON-SALEM N.C. 27102

Greater Algona Cable TV, Inc.
Box 598 - 118 N. Thurington Street
ALGONA, IOWA 50511

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4209
Okla.

Community Antennas
4209 NW 23rd. Suite 106
Oklahoma City, OK

TV CABLE SYSTEM
Box 27
Houston, Mo. 65483



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P. O. Box 406
Ellijay, Georgia 30540

CAT
Su
C

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2215 W. Chicago Road
STERLING, MICHIGAN 49081

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Rob Cooper
4209 N.W. 23rd Street
Suite 106
Oklahoma City, Oklahoma

ALPINE TV CABLE COMPANY, INC.
Box 600
ALPINE, TEXAS 79830

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910 CITY NATIONAL BANK BUILDING
AUSTIN, TEXAS 78701

Mr.
CATJ
4209 NW 23rd
Oklahoma City,

TE
TELE-MEDIA COMPANY
417 FLEMING STREET • KEY WEST, FLORIDA 33040

Cable-Vision
Box 757
Gatesville, Texas 76528

CAT
Suite
Okla

GTV
CABLE
General
TELEVISION,
INC. OF ST. CLOUD
P.O. Box 1188
Carnegie Plaza
St. Cloud, MN 56301

CAT
Suite
4209
O

COASTAL CABLE COMPANY, INC.
301 MAIN STREET
NORTH MYRTLE BEACH, SOUTH CAROLINA
29582

M.
% CATJ
4209 NW 23rd
Oklahoma City, Okla.

PAW PAW LAKE AREA
CABLE TV CO.
P.O. Box 501
Watervliet, MI 49095

CATJ
Suite
Okla

BIG SANDY TV CABLE
P. O. BOX 956
PAINESVILLE, KY. 41240

CABLE TV OF PALATKA
A DIVISION OF PALATKA COMMUNICATIONS, INC.
800 E. JONES AVENUE
PALATKA, FLORIDA 32977

CATJ
Suite
OKLAHOMA

CATJ
Suite 106
4209 NW 23rd
Oklahoma City, Oklahoma 73107